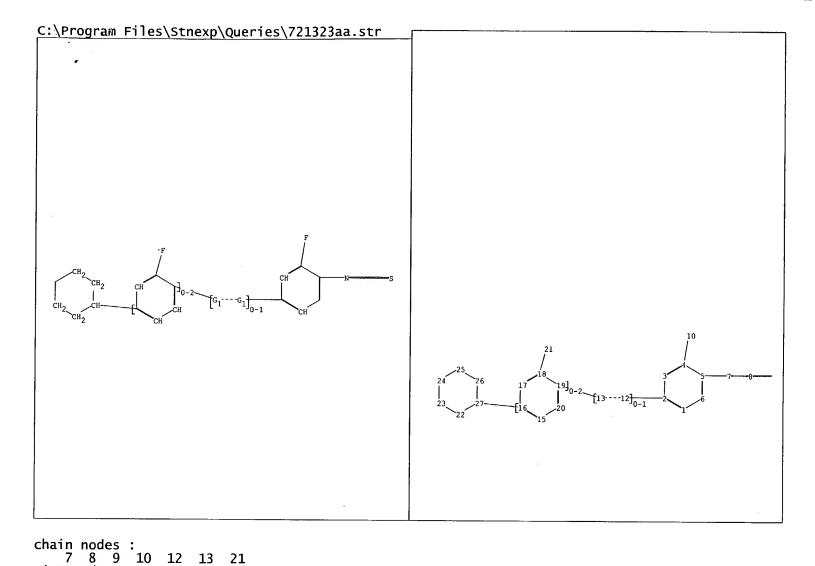
WEST Search History

Hide Items Restore Clear Cancel

DATE: Tuesday, July 20, 2004

Hide?	<u>Set</u> <u>Name</u>	Query	<u>Hit</u> Count				
DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=ADJ							
	L16	L15 same nematic	10				
	L15	color filter near2 array	1960				
	L14	L12 and nematic	1				
	L13	L12 same nematic	0				
	L12	aoc or coa	9419				
	L11	12 and stn	2				
	L10	12 and filter	2				
	L9	L2 and ocb	1				
	L8	L2 and display and nematic	9				
	L7	L2 and display	10				
	L6	12 and device	0				
	L5	12 and device	0				
	L4	us-20020030180-\$.did.	1				
	L3	12 and nematic	9				
	L2	us-6723866-\$.did. or us-6716491-\$.did. or us-4970022-\$.did. or jp-2002012871-\$.did. or jp-2002003844-\$.did. or De-10133867-\$.did.	12				
	L1	us-6723866-\$.did. or us-6716491-\$.did. or us-4970022-\$.did. or jp-2002012871-\$.did. or jp-2002003844-\$.did. or wo-2002012415-\$.did.	- 10				

END OF SEARCH HISTORY



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ring nodes:

1 2 3 4 5 6 15 16 17 18 19 20 22 23 24 25 26 27

chain bonds:

2-12 4-10 5-7 7-8 8-9 12-13 13-19 16-27 18-21

ring bonds:

1-2 1-6 2-3 3-4 4-5 5-6 15-16 15-20 16-17 17-18 18-19 19-20 22-23 22-27

23-24 24-25 25-26 26-27

exact/norm bonds:

2-12 5-7 7-8 8-9 12-13 13-19 22-23 22-27 23-24 24-25 25-26 26-27

exact bonds:

4-10 16-27 18-21
```

G1:C,0

normalized bonds:

Match level:
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS 12:CLASS 13:CLASS 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom

1-2 1-6 2-3 3-4 4-5 5-6 15-16 15-20 16-17 17-18 18-19 19-20

```
1988:464506 CAPLUS
DN
     109:64506
ED
     Entered STN: 19 Aug 1988
TI
     Liquid-crystal isothiocyanates for electrooptical display devices
IN
     Schueble, Bernhard; Eidenschink, Rudolf; Krause, Joachim; Poetsch, Eike;
     Waechtler, Andreas
PA
     Merck Patent G.m.b.H., Fed. Rep. Ger.
SO
     Ger. Offen., 11 pp.
     CODEN: GWXXBX
DT
     Patent
LA
     German
TC
     ICM C07C161-04
     ICS C09K019-06; C07D239-26; G02F001-13
     74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
     Section cross-reference(s): 75
FAN.CNT 1
     PATENT NO.
                    KIND DATE
                                          APPLICATION NO. DATE
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     DE 3545345
PΙ
                      A1
                            19870702
                                          DE 1985-3545345 19851220
     WO 8703870
                      A1
                           19870702
                                          WO 1986-EP720
         W: JP, KR, US
         RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
                A1
     EP 250505
                           19880107
                                          EP 1987-900109
                                                           19861206
     EP 250505
                      B1
                           19900704
        R: CH, DE, FR, GB, IT, LI, NL, SE
     JP 63502114 T2 19880818
                                          JP 1987-500679
                                                           19861206
     US 4970022
                      Α
                           19901113
                                          US 1987-110756
                                                           19870819
PRAI DE 1985-3545345
                           19851220
     WO 1986-EP720
                           19861206
AB
     Isothiocyanates of the general formula R(A1Z1)nA2Z2A3NCS, where R = H or
     C1-15 alkyl in which 1 or 2 non-neighboring CH2 groups can be replaced by
     O, CO, OCO, and/or COO; A1, A2 = (un) substituted 1,4-cyclohexylene,
     piperidine-1,4-diyl, 1,4-bicyclo[2.2.2]octylene, or 1,4-phenylene,
     optionally substituted by 1 or 2 F, Cl, Me, and/or CN and in which 1 or 2
     CH groups can be replaced by N; A3 = (un)substituted 1,4-cyclohexylene or
     1,4-phenylene, optionally substituted by 1 or 2 F, Cl, Me, CF3, and/or CN;
     Z1, Z2 = COO, OCO, O, CH2CH2, CHCNCH2, CH2CHCN, CH:CH, OCH2, CH2O, CH:N,
     N:CH, NO:N, N:NO, or a single bond; and n=0, 1, or 2 (when Z2=COO,
     (A1Z1) nA2 is not 1,4-phenylene or cyclohexylenylphenylene), useful in
     liquid-crystal display devices, are prepared trans-4-(4-
     Isothiocyanatocyclohexyl) heptylcyclohexane was prepared from
     trans-4-(4-chlorocyclohexyl) heptylcyclohexane and ammonium thiocyanate.
     liq crystal isothiocyanate; electrooptical display isothiocyanate liq
     crystal
IT
     Liquid crystals
        (isothiocyanates)
IT
     Optical imaging devices
        (electro-, liquid-crystal, isothiocyanates for)
IT
                  113825-53-9P 113825-54-0P 113825-55-1P 113825-56-2P
     104569-88-2P
     113825-57-3P
                   113825-58-4P 113825-59-5P 113825-60-8P
     RL: PREP (Preparation)
        (preparation of, for liquid-crystal electrooptical display devices)
IT
     75-15-0, reactions 121-44-8, reactions 463-71-8 463-73-0 1762-95-4
     113825-61-9
                  113825-62-0 113825-63-1
                                              113825-65-3 113825-66-4
     113825-67-5
                  113825-68-6 113825-69-7
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, in preparation of liquid-crystal isothiocyanates)
TT
    113825-59-5P
    RL: PREP (Preparation)
        (preparation of, for liquid-crystal electrooptical display devices)
RN
     113825-59-5 CAPLUS
CN
     Cyclohexanecarboxylic acid, 4-propyl-, 3-fluoro-4-isothiocyanatophenyl
     ester, trans- (9CI) (CA INDEX NAME)
```

ΔN

- TI Nematic liquid crystal mixture showing excellent properties suitable for liquid crystal display
- IN Tarumi, Kazuaki; Schuler, Brigitte; Bremer, Matthias; Finkenzeller, Ulrich; Poetsch, Eike; Kneile, Hieke
- PA Merck Patent G.M.B.H., Germany
- SO Jpn. Kokai Tokkyo Koho, 27 pp. CODEN: JKXXAF
- DT Patent
- LA Japanese
- IC ICM C09K019-30 ICS C09K019-10; C09K019-12; C09K019-14; C09K019-20; C09K019-32; C09K019-34; G02F001-13; G02F001-139
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes) Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PI	JP 2002012868	A2	20020115	JP 2001-137755	20010508		
	US 2002030180	A1	20020314	US 2001-850408	20010508		
	US 6716491	B2	20040406				
PRAI	EP 2000-109161	A	20000508				
os	MARPAT 136:110199						
GI							

Ι

$$R^{1-}(A^{1-}Z^{1}) n^{-}A^{2-}Z^{2}$$
 NCS

- AB The invention relates to a nematic liquid crystal mixture having pos. dielec. anisotropy containing I (R1 = C1-12-alkyl, alkoxy, alkenyl; Z1, Z2 = -O-, -C00-, -OC0-, -CH2CH2-, -CH:CH-, -CF2CF2-, -CF2O-, -OCF2-, -CH2O-, -OCH2-, -CF:CF-, single bond; A1, A2 = trans-1,4-cyclohexylene, 1,4-biphenylene, etc.; n = 0, 1; L1, L2 = H, F). The mixture also contains other specified compds. (described with Markush structures). The liquid crystal mixture shows high clear point and higher holding ratio suitable for liquid crystal displays.
- ST nematic liq crystal mixt synthesis display
- IT Liquid crystal displays

(nematic liquid crystal mixture showing excellent properties suitable for liquid crystal display)

IT Liquid crystals

(nematic; nematic liquid crystal mixture showing excellent properties suitable for liquid crystal display)

IT 81793-57-9 81793-59-1 87260-24-0 131819-23-3 133914-49-5 133937-72-1 135734-59-7 135734-60-0 137644-54-3 139215-80-8 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(nematic liquid crystal mixture showing excellent properties suitable for liquid crystal display)

IT 243651-32-3P 243651-36-7P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of nematic liquid crystal mixture showing excellent properties suitable for liquid crystal display)

IT 100-39-0, Benzyl bromide 288-32-4, Imidazole, reactions 463-71-8, Thiophosgene 5509-65-9, 2,6-Difluoroaniline 6160-65-2 7726-95-6,

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Bromine, reactions
                          88419-51-6
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of nematic liquid crystal mixture showing excellent properties
        suitable for liquid crystal display)
IT
     67567-26-4P, 4-Bromo-2,6-difluoroaniline
                                                389088-33-9P
                                                               389088-34-0P
     389088-35-1P
                    389088-36-2P
                                   389088-37-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of nematic liquid crystal mixture showing excellent properties
        suitable for liquid crystal display)
     243651-33-4P 243651-34-5P 243651-35-6P
     243651-37-8P 243651-40-3P 243651-41-4P
     243651-42-5P 389088-38-4P 389088-39-5P
     389088-40-8P 389088-41-9P 389088-42-0P
     389088-43-1P 389088-44-2P 389088-45-3P
     389088-46-4P 389088-47-5P 389088-48-6P
     389088-49-7P 389088-50-0P 389088-51-1P
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     389088-55-5P 389088-56-6P 389088-57-7P
     389088-58-8P 389088-59-9P 389088-60-2P
     389088-61-3P 389088-62-4P 389088-63-5P
     389088-64-6P 389088-65-7P 389088-66-8P
     389088-67-9P 389088-68-0P 389088-69-1P
     389088-70-4P 389088-71-5P 389088-72-6P
     389088-73-7P 389088-74-8P 389088-75-9P
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                    389127-41-7P
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (preparation of nematic liquid crystal mixture showing excellent properties
        suitable for liquid crystal display)
IT
     243651-32-3P 243651-36-7P
     RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (preparation of nematic liquid crystal mixture showing excellent properties
        suitable for liquid crystal display)
RN
     243651-32-3 CAPLUS
     Benzene, 1,3-difluoro-2-isothiocyanato-5-[(trans,trans)-4'-propyl[1,1'-
CN
     bicyclohexyl]-4-yl]- (9CI) (CA INDEX NAME)
```

```
AN
     2002:123147 CAPLUS
DN
     136:175558
ED
     Entered STN: 15 Feb 2002
TT
     Electrooptical liquid crystal display of IPS (In-Plane-Switching) mode
TN
     Heckmeier, Michael; Poetsch, Eike
     Merck Patent G.m.b.H., Germany
PA
SO
     PCT Int. Appl., 59 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     German
     ICM C09K019-34
IC
     ICS C09K019-44; C09K019-46
CC
     74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
     Section cross-reference(s): 75
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                        ----
                               -----
                                                 -----
PΤ
     WO 2002012415
                        A1
                                20020214
                                                WO 2001-EP7980 20010711
          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
               GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
               LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
               RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 2001070629
                          A5
                                20020218
                                                AU 2001-70629
                                                                    20010711
                                                 JP 2002-517707
     JP 2004517972
                          T2
                                20040617
                                                                    20010711
     DE 10133867
                                                 DE 2001-10133867 20010712
                          Α1
                                20020411
     US 2003207045
                                                 US 2003-343768
                          Α1
                                20031106
                                                                    20030204
PRAI DE 2000-10038859
                                20000804
                          Α
     WO 2001-EP7980
                          W
                                20010711
os
     MARPAT 136:175558
GI
```

of

IT

AB The invention relates to an electrooptical liquid crystal display comprising a reorientation layer for reorientation of the liquid crystals. The field of said reorientation layer has a component parallel to the liquid crystal layer, said component being crucial for the reorientation. Said component comprises a liquid-crystalline medium having a pos. dielec. anisotropy and contains at least one mesogenic compound of the formula I (R1 = C≤15 alkyl, alkenyl; L = H, F).

ST electrooptical IPS liq crystal display reorientation layer mesogenic compd IT Liquid crystal displays

(liquid crystal mixture suitable for electrooptical liquid crystal display

IPS (In-Plane-Switching) mode with reorientation layer) Liquid crystals

Ι

(nematic; liquid crystal mixture suitable for electrooptical liquid crystal

display of IPS (In-Plane-Switching) mode with reorientation layer) 74240-64-5 81936-32-5 84540-37-4 86776-50-3 IT 41122-70-7 129738-34-7 133937-72-1 135520-41-1 92263-41-7 116020-44-1 155041-85-3 181943-55-5 279246-65-0 135734-59-7 142400-92-8 326894-55-7 385435-68-7 **389088-69-1** 288579-86-2 288579-85-1 397883-56-6 389088-70-4

RL: TEM (Technical or engineered material use); USES (Uses) (liquid crystal mixture suitable for electrooptical liquid crystal display

- (1) Dabrowski, R; LIQUID CRYSTALS 1998, V24(4), P583 CAPLUS
- (2) Merck Patent Gmbh; DE 19528104 A 1997 CAPLUS
- (3) Merck Patent Gmbh; DE 19811456 A 1999 CAPLUS
- IT 389088-69-1 389088-70-4

RL: TEM (Technical or engineered material use); USES (Uses) (liquid crystal mixture suitable for electrooptical liquid crystal display

IPS (In-Plane-Switching) mode with reorientation layer)

RN 389088-69-1 CAPLUS

of

CN Benzene, 5-(trans-4-ethylcyclohexyl)-1,3-difluoro-2-isothiocyanato- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 389088-70-4 CAPLUS

CN Benzene, 1,3-difluoro-2-isothiocyanato-5-(trans-4-propylcyclohexyl)- (9CI)
(CA INDEX NAME)

```
AN
     2002:36629 CAPLUS
DN
     136:110201
ED
     Entered STN: 15 Jan 2002
TI
     Liquid crystal compound, nematic liquid crystal mixture, and polymer
     dispersion liquid crystal display
TN
     Poetsch, Eike; Meyer, Volker; Krause, Joachim; Manabe, Atsutaka
PΆ
     Merck Patent G.M.B.H., Germany
SO
     Jpn. Kokai Tokkyo Koho, 40 pp.
     CODEN: JKXXAF
DT
     Patent
     Japanese
LA
IC
     ICM C09K019-42
     ICS C09K019-12; C09K019-16; C09K019-30; G02F001-13; G02F001-1334
     74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
     Reprographic Processes)
     Section cross-reference(s): 75
FAN.CNT 1
                                        APPLICATION NO. DATE
     PATENT NO.
                    KIND DATE
     -----
PI JP 2002012871 A2 20020115
PRAI EP 2000-109163 A 20000508
                                          JP 2001-137750 20010508
     MARPAT 136:110201
     The invention relates to a nematic liquid crystal mixture containing a pos.
AΒ
     anisotropic compound(s) showing ∆n of ≥0.30 (at 20°,
     589.3 nm) represented by R1-A11-Z11-[A12-Z12]n-A13-NCS (R1 = C1-12-alky,
     Cl, OCF3, CN, NCS, F; Zl1, Zl2 = trans-CH:CH-, -CH:CF-, -CF:CH-, -CF:CF-,
     single bond; All = trans-1,4-cyclohexylene, 1,4-phenylene, 1,4-phenylene
     with F-substituent(s); A12, A13 = 1,4-phenylene, 1,4-phenylene with
     F-substituent(s); n = 0, 1) and a pos. anisotropic compound(s) represented
     by R2-[A21]n-A22-A23-X2 (R2 = C1-12-alky, Cl, OCF3, CN, NCS, F; Z11, Z12 = C1-12-alky)
     trans-CH:CH-, -CH:CF-, -CF:CH-, -CF:CF-, single bond; A21 =
     trans-1,4-cyclohexylene, 1,4-phenylene, 1,4-phenylene with
     F-substituent(s); A22, A23 = 1,4-phenylene, 1,4-phenylene with
     F-substituent(s); X2 = CN, F, Cl; n = 0, 1). The liquid crystal mixture,
     showing wide-nematic-phase temperature ranges and low viscosity, is especially
     suitable for (holog.) polymer dispersed liquid crystal displays.
ST
     nematic liq crystal mixt polymer dispersion display
IT
     Liquid crystal displays
        (nematic liquid crystal mixture especially suitable for holog. polymer
dispersion
        liquid crystal display)
     Liquid crystals
IT
        (nematic; nematic liquid crystal mixture especially suitable for holog.
polymer
        dispersion liquid crystal display)
     38190-45-3 40817-08-1 52709-86-1 54211-46-0 63617-61-8
IT
     99217-32-0
                 99602-91-2 104569-87-1 104569-88-2 116831-09-5
     132123-39-8 137019-94-4 137019-95-5 219939-28-3 219939-29-4
     281680-31-7
                 313472-50-3
                                316364-68-8 356797-91-6 356797-92-7
     356797-93-8 356797-97-2 356797-99-4 356798-03-3 356798-05-5
     356798-06-6 . 356798-12-4 . 356798-23-7 . 356798-25-9 . 356798-26-0
     356798-27-1 356798-31-7
                               356798-32-8
                                             385435-70-1 388625-24-9
                 388625-26-1
                                388625-28-3
     388625-25-0
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                                388625-45-4
     388625-33-0
                  388625-42-1
     RL: PRP (Properties); TEM (Technical or engineered material use); USES
        (nematic liquid crystal mixture especially suitable for holog. polymer
dispersion
        liquid crystal display)
IT
     288-32-4, Imidazole, reactions
                                    463-71-8, Thiophosgene
                                                              6160-65-2
     67567-26-4, 4-Bromo-2,6-difluoroaniline 143651-26-7, Boronic acid,
     [4-(4-pentylcyclohexyl)phenyl]-, trans-
                                              388623-07-2
                                                           388623-85-6
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of nematic liquid crystal mixture especially suitable for
holog. polymer
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```
dispersion liquid crystal display)
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IT
     138074-14-3P
                    385435-64-3P
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     388623-90-3P
                    388623-91-4P
                                   388623-93-6P
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                                   388623-98-1P
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                                                                  388624-00-8P
     388624-01-9P
                    388624-02-0P
                                   388624-03-1P
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                                   388624-09-7P
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                    388624-14-4P
                                   388624-15-5P
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                                                                  388624-17-7P
     388624-18-8P
                    388624-19-9P
                                   388624-21-3P
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                    388624-25-7P
                                   388624-26-8P
                                                  388624-27-9P
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                                   388624-40-6P
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                                   388624-83-7P
     388624-86-0P
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                                   388624-93-9P
                                                  388624-94-0P
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                    388624-97-3P
                                   388624-98-4P
                                                  388624-99-5P
                                                                  388625-00-1P
     388625-01-2P
                    388625-02-3P
                                   388625-03-4P
                                                  388625-04-5P
                                                                  388625-05-6P
     388625-06-7P
                    388625-07-8P
                                   388625-08-9P
                                                  388625-09-0P
                                                                  388625-10-3P
     388625-11-4P
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                                                  388625-14-7P
                                                                  388625-15-8P
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                    388625-17-0P
                                   388625-18-1P
                                                  388625-19-2P
                                                                  388625-20-5P
     388625-21-6P
                    388625-22-7P
                                   388625-23-8P
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (preparation of nematic liquid crystal mixture especially suitable for
holog. polymer
        dispersion liquid crystal display)
IT
     388625-33-0
     RL: PRP (Properties); TEM (Technical or engineered material use); USES
     (Uses)
        (nematic liquid crystal mixture especially suitable for holog. polymer
dispersion
        liquid crystal display)
RN
     388625-33-0 CAPLUS
CN
     [1,1':4',1''-Terphenyl]-4-carbonitrile, 3'-fluoro-4''-propyl-, mixt. with
     4-butyl-2,6-difluoro-4''-isothiocyanato-1,1':4',1''-terphenyl,
     4-butyl-2'-fluoro-4''-isothiocyanato-1,1':4',1''-terphenyl,
     3,5-difluoro-4-isothiocyanato-4'-(trans-4-methylcyclohexyl)-1,1'-biphenyl,
     3,5-difluoro-4-isothiocyanato-4'-(trans-4-propylcyclohexyl)-1,1'-biphenyl,
     4'-(trans-4-ethylcyclohexyl)-3,5-difluoro-4-isothiocyanato-1,1'-biphenyl,
     4-(5-phenyl-2-pyridinyl)benzonitrile and 2,3',5'-trifluoro-4'-
```

AN 2003:114233 CAPLUS

DN 138:145213

ED Entered STN: 14 Feb 2003

TI Liquid crystal compounds for liquid crystal mixture suitable for liquid crystal display

IN Kirsch, Peer; Unger, Gerald; Lenges, Marc; Krause, Joachim; Heckmeier, Michael

PA Merck Patent GmbH, Germany

SO Ger. Offen., 80 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C331-28 ICS C07D319-04; C09K019-06; G02F001-137; G09F009-35; C07D339-08; C07D213-04

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO. DATE			
ΡI	DE 10229476	A1	20030213	DE 2002-10229476 20020701			
	GB 2379442	A1	20030312	GB 2002-17060 20020723			
	JP 2003176265	A2	20030624	JP 2002-216482 20020725			
	US 2003216554	A1	20031120	US 2002-202633 20020725			
	US 6723866	B2	20040420				
PRAI	DE 2001-10136188	A1	20010725				
os	MARPAT 138:145213						
GI							

$$R^{1}(A^{1}Z^{1})_{n}(A^{2}Z^{2})_{m}$$
 NCS

AB The invention relates to liquid crystalline compds. of the formula I (R1 = C1-15-alkyl; A1, A2 = 1,4-cyclohexenylene, 1,4-cyclohexylene, etc.; Z1, Z2 = -C00-, -OCO-, etc.; n = 0; 1, 2; m = 1, 2; L1-3 = H, F, Cl), their synthesis, as well as liquid crystalline media containing at least one of the compds., and electrooptical displays containing such a liquid crystalline medium.

ST liq crystal compd synthesis mixt display

IT Liquid crystal displays

(liquid crystal compds. for liquid crystal mixture suitable for liquid crystal

display)

IT Liquid crystals

(nematic; liquid crystal compds. for liquid crystal mixture suitable for liquid

crystal display)

IT 76802-59-0 76802-61-4 81711-13-9 84816-56-8 102714-93-2 106349-49-9 121219-85-0 133914-49-5 133914-50-8 133937-72-1 135734-59-7 135734-60-0 137528-82-6 137528-84-8 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(liquid crystal mixture suitable for liquid crystal display)
IT 100-02-7, 4-Nitrophenol, reactions 109-80-8, 1,3-Propanedithiol
124-38-9, Carbon dioxide, reactions 1493-13-6, Trifluoromethanesulfonic

6160-65-2, Thiocarbonylbisimidazole 2713-34-0, 3,5-Difluorophenol 26386-88-9 65355-32-0 RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of liquid crystal compds. for liquid crystal mixture suitable for liquid crystal display) 494213-20-6P 494213-18-2P 494213-21-7P 494213-17-1P IT358732-12-4P 494213-22-8P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of liquid crystal compds. for liquid crystal mixture suitable for liquid crystal display) 494213-19-3P 494213-23-9P IT RL: SPN (Synthetic preparation); TEM (Technical or engineered material

usė); PREP (Preparation); USES (Uses)

(preparation of liquid crystal compds. for liquid crystal mixture suitable

for

liquid crystal display)

IT494213-23-9P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of liquid crystal compds. for liquid crystal mixture suitable

for

liquid crystal display)

RN494213-23-9 CAPLUS

Benzene, 5-[difluoro[(trans,trans)-4'-propyl[1,1'-bicyclohexyl]-4-CN yl]methoxy]-1,3-difluoro-2-isothiocyanato- (9CI) (CA INDEX NAME)